

CLAIMS

1. A system for providing a wavelength of light, comprising:
a scanner that provides a first wavelength; and
an optical assembly that emits a second wavelength based, at least in part upon
5 the first wavelength, wherein the second wavelength is not the result of a fluorescent
emission.
2. The system of claim 1, wherein:
the first wavelength corresponds to a wavelength that excites one or more
10 fluorescent molecules.
3. The system of claim 1, wherein:
the fluorescent emission corresponds to an emission from a fluorescent molecule
associated with a target molecule.
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4. The system of claim 3, wherein:
the target molecule is present in a biological sample.
5. The system of claim 1, wherein:
20 the optical assembly further comprises:
a detector that detects a first measure of power associated with the first
wavelength;
a control unit that provides a second measure of power proportional to the first
measure of power, wherein the second measure of power is associated with the second
25 wavelength; and
a source that emits the second wavelength at the second measure of power.
6. The system of claim 1, further comprising:
an instrument control application that calibrates one or more detectors associated
30 with the scanner.

7. The system of claim 6, wherein:
the calibration includes a gain calibration.

8. A method for providing a wavelength of light comprising:
5 providing a first wavelength; and
emitting a second wavelength based, at least in part upon the first wavelength,
wherein the second wavelength is not the result of a fluorescent emission.

9. The method of claim 8, wherein:
10 the first wavelength corresponds to a wavelength capable of exciting one or more
fluorescent molecules.

10. The method of claim 8, wherein:
the fluorescent emission corresponds to an emission from a fluorescent molecule
15 associated with a target molecule.

11. The method of claim 10, wherein:
the target molecule is present in a biological sample.

20 12. The method of claim 8, wherein the step of emitting further comprises:
detecting a first measure of power associated with the first wavelength;
providing a second measure of power proportional to the first measure of power,
wherein the second measure of power is associated with the second wavelength; and
emitting the second wavelength at the second measure of power.

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13. The method of claim 8, further comprising:
calibrating one or more detectors associated with a scanner based, at least in part,
upon the second wavelength and the second measure of power.

30 14. An optical assembly, comprising:
a detector that detects a first measure of power associated with a first wavelength;

a control unit that provides a second measure of power proportional to the first measure of power, wherein the second measure of power is associated with a second wavelength; and

a source that emits the second wavelength at the second measure of power.

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15. The optical assembly of claim 14, wherein:

the first wavelength corresponds to a wavelength that excites one or more fluorescent molecules.

10 16. The optical assembly of claim 14, wherein:

the second wavelength is not the result of a fluorescent emission.

17. The optical assembly of claim 16, wherein:

the fluorescent emission corresponds to an emission from a fluorescent molecule

15 associated with a target molecule.

18. The optical assembly of claim 17, wherein:

the target molecule is present in a biological sample.

20 19. A method of using an optical assembly, comprising:

detecting a first measure of power associated with a first wavelength;

providing a second measure of power proportional to the first measure of power,

wherein the second measure of power is associated with a second wavelength; and

emitting the second wavelength at the second measure of power.

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20. A system for calibrating a scanner, comprising:

a scanner that provides a first wavelength;

a first detector that detects a first measure of power associated with the first wavelength;

a control unit that provides a second measure of power proportional to the first measure of power, wherein the second measure of power is associated with a second wavelength;

a source that emits the second wavelength at the second measure of power;

5 a second detector associated with the scanner, wherein the second detector generates a signal based, at least in part, upon the second wavelength and the second measure of power; and

an instrument control application that calibrates the second detector based, at least in part, upon the signal.

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21. The system of claim 20, wherein:

the second wavelength is not the result of a fluorescent emission.

22. The system of claim 21, wherein:

15 the fluorescent emission corresponds to an emission from a fluorescent molecule associated with a target molecule.

23. The system of claim 20, wherein:

the first wavelength corresponds to a wavelength that excites one or more

20 fluorescent molecules.

24. The system of claim 20, wherein:

the calibration includes a gain calibration.

25 25. A method for calibrating a scanner, comprising:

providing a first wavelength;

detecting a first measure of power associated with the first wavelength;

providing a second measure of power proportional to the first measure of power,

wherein the second measure of power is associated with a second wavelength;

30 emitting the second wavelength at the second measure of power;

generating a signal based, at least in part, upon the second wavelength and the second measure of power; and
calibrating the second detector based, at least in part, upon the signal.

5 26. A system for calibrating a scanner, comprising:

a scanner that provides a first wavelength;

an optical assembly that comprises:

 a first detector that detects a first measure of power associated with the first wavelength;

10 a control unit that provides a second measure of power proportional to the first measure of power, wherein the second measure of power is associated with a second wavelength; and

 a source that emits the second wavelength at the second measure of power;

 a second detector associated with the scanner, wherein the second detector

15 generates a signal based, at least in part, upon the second wavelength and the second measure of power; and

 a computer having system memory with an instrument control application stored thereon, wherein the instrument control application executes the step of:

 calibrating the second detector based, at least in part, upon the signal.

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